

REMARKS

The present Amendment amends claims 1, 8, 11, 12, and 30-34, leaves claims 2-7, 9, 10, 13-29, and 35-43 unchanged, and adds new claims 44-47. Therefore, the present application has pending claims 1-47.

35 U.S.C. §103 Rejections**I. Claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43**

Claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over in view of U.S. Patent No. 5,920,856 to Syeda-Mahmood in view of U.S. Patent No. 6,076,083 to Baker. This rejection is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43, are not taught or suggested by Syeda-Mahmood or Baker, whether taken individually or in combination with each other in the manner suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Specifically, amendments were made to the claims to more clearly recite that the present invention is directed to a method for generating information on new solutions for solving problems, an information service providing system, a recording medium having instructions for providing a solution to a problem, and a method for generating information at an engineering portal site, as recited, for example, in independent claims 1, 8, 11, 12, and 30-34.

A. Claims 1-5, 8-13, 34, and 43

The present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, provides a method for generating information non new solutions for solving a plurality of problems, where the generated information is output to a display at a site server. The method includes a step of receiving, at the site server, an instruction including information on a database to be searched related to a problem input by a user. The method also includes a step of searching either one of a meta database or a case database in accordance with the information. According to the present invention, the meta database stores information on common rules to resolve each of the plurality of problems, where the common rules are extracted from the plurality of problems classified according to a characteristic of each of the plurality of problems. The meta database is provided within a second apparatus including a content offer server in advance. Also according to the present invention, the case database stores information regarding a plurality of problems that have occurred in the past. The case database is provided within a server. The method also includes a step of determining whether or not the meta database is to be searched in accordance with the information regarding the case database to be searched. Another step includes searching the meta database, if it is determined that the meta data base is to be searched, or searching the case database, if it is determined that the meta database is not to be searched. After this determination, either the meta database or the case database is searched for a rule for solving the a problem in response to the instruction received at the site server. According to the present invention the meta database includes a plurality of rules extracted from a

plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. Also according to the present invention, the case database contains new solutions to solve the problems. Each example includes an instrument having a predetermined function according to the plurality of rules to determine information regarding a relationship between one of the solutions and one of the problems to be solved to generate data regarding the examples of new solutions. Another step includes displaying on the display the data regarding the examples of new solutions to solve the problem with corresponding instruments and with corresponding rules in the plurality of rules in the meta database. The prior art does not disclose all of these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

Syeda-Mahmood teaches a system for selecting multimedia databases over networks. However, there is no teaching or suggestion in Syeda-Mahmood of the method for generating information on new solutions for solving problems, the information service providing system, the recording medium having instructions for providing a solution to a problem, or the method for generating information at an engineering portal site, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34 of the present invention.

Syeda-Mahmood provides a network server that interfaces a client with selected database sites from a plurality of database sites. The network server includes a meta-database (including both text information and multimedia information), a search agent, and a refining module. The search agent indexes the meta-database with a user query obtained from the client, and then distributes queries, developed pursuant to such indexing, to the selected ones of the plurality of database sites. In turn, database site information (responsive to the distributed queries) is retrieved from the selected ones of the plurality of database sites. A refining module is used to update the meta-database with the database relevancy information.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching either one of a meta database or a case database in accordance with the information. According to the present invention, the meta database stores information on common rules to resolve each of the plurality of problems, where the common rules are extracted from the plurality of problems classified according to a characteristic of each of the plurality of problems. The meta database is provided within a second apparatus including a content offer server in advance. Also according to the present invention, the case database stores information regarding a plurality of problems that have occurred in the past. The case database is provided within a server. Syeda-Mahmood does not disclose searching either one of a meta database or a case database, as claimed.

To support the assertion that Syeda-Mahmood discloses a meta database and a case database, the Examiner cites column 5, line 39 to column 6, line 22.

However, neither the cited text nor any other portions of Syeda-Mahmood teach or suggest the claimed features. For example, as described in the cited text, Syeda-Mahmood describes a meta-database 4, as shown in Fig. 2. The meta-database is further divided into a first level 4' and a second level 4". At the first level 4', the databases at web sites can be categorized into groups based on the type of queries they support and the types of media data they house. At the second level 4", the database sites are categorized based on the query type at the earlier level and is further grouped based on scope and relevancy data for handling image content-based content queries. These features of both the first level and the second level of the meta database 4 of Syeda-Mahmood are quite different from the meta database and case database of the present invention. More specifically, the first level of Syeda-Mahmood is not a case database, where the case database stores information on a plurality of problems that have occurred in the past, and the second level of Syeda-Mahmood is not a meta database, where the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems, as claimed.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching the meta database, if it is determined that the meta data base is to be searched, or searching the case database, if it is determined that the meta database is not to be searched. After this determination, either the meta database or the case database is searched for a rule for solving the a problem in response to the instruction received at the site server.

According to the present invention the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. Also according to the present invention, the case database contains new solutions to solve the problems. Each example includes an instrument having a predetermined function according to the plurality of rules to determine information regarding a relationship between one of the solutions and one of the problems to be solved to generate data regarding the examples of new solutions. Syeda-Mahmood does not teach all of these features.

For example, Syeda-Mahmood does not teach or suggest where the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. This feature of the present invention is shown, for example, on Fig. 3 and is described in the accompanying text. To support the assertion that Syeda-Mahmood teaches this feature, the Examiner cites column 1, line 65 to column 2, line 16. However, neither the cited text nor any other portion of Syeda-Mahmood discloses the claimed feature. The cited text provides background information regarding the invention, including problems sought to be overcome by the Syeda-Mahmood system. For instance, the text describes where if a query is posed to several databases, the answers may need consolidation and summarization before they can be presented to a user. This has no relationship

whatsoever to where the meta database of the present invention includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter, as claimed.

Therefore, Syeda-Mahmood fails to teach or suggest “searching either one of a meta database or a case database in accordance with the information, the meta database storing information on common rules to resolve each of the plurality of problems, the common rules being extracted from the plurality of problems and being classified according to characteristics of each of the plurality of problems, the meta database being provided within a second apparatus including a content offer server in advance, the case database storing information on a plurality of problems which have occurred in the past, and the case database being provided within a server accordance with the information” as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34.

Furthermore, Syeda-Mahmood fails to teach or suggest “searching said meta database, if it is determined that the meta database is to be searched, or searching said case database, if it determined that the meta database is not to be searched, for a rule for solving the problem in response to the instruction received, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions for any of the plurality of problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance,

the case database containing the new solutions to solve the problems, each example including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions” as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34.

The above noted deficiencies of Syeda-Mahmood are not supplied by any of the other references of record, namely Baker, whether taken individually or in combination with each other. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Baker teaches a diagnostic system using a Bayesian network model having link weights updated experimentally. However, there is no teaching or suggestion in Baker of the method for generating information on new solutions for solving problems, the information service providing system, the recording medium having instructions for providing a solution to a problem, or the method for generating information at an engineering portal site, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34 of the present invention.

Baker discloses a diagnostic systems utilizing a Bayesian network model having link weights updated experientially including an algorithm for easily quantifying the strength of links in a Bayesian network, a method for reducing the amount of data needed to automatically update the probability matrices of the

network on the basis of experiential knowledge, and methods and algorithms for automatically collecting knowledge from experience and automatically updating the Bayesian network with the collected knowledge. An exemplary embodiment provides a trouble ticket fault management system for a communications network. The exemplary embodiment is particularly appropriate for using the automatic learning capabilities of the invention. In the exemplary embodiment, a communications network is represented as a Bayesian network where devices and communication links are represented as nodes in the Bayesian network. Faults in the communications network are identified and recorded in the form of a trouble ticket and one or more probable causes of the fault are given based on the Bayesian network calculations. When a fault is corrected, the trouble ticket is updated with the knowledge learned from correcting the fault. The updated trouble ticket information is used to automatically update the appropriate probability matrices in the Bayesian network.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching either one of a meta database or a case database in accordance with the information. According to the present invention, the meta database stores information on common rules to resolve each of the plurality of problems, where the common rules are extracted from the plurality of problems classified according to a characteristic of each of the plurality of problems. The meta database is provided within a second apparatus including a content offer server in advance. Also according to the present invention, the case database stores information regarding a plurality of problems that have occurred in the past.

The case database is provided within a server. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching the meta database, if it is determined that the meta data base is to be searched, or searching the case database, if it is determined that the meta database is not to be searched. After this determination, either the meta database or the case database is searched for a rule for solving the a problem in response to the instruction received at the site server. According to the present invention the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. Also according to the present invention, the case database contains new solutions to solve the problems. Each example includes an instrument having a predetermined function according to the plurality of rules to determine information regarding a relationship between one of the solutions and one of the problems to be solved to generate data regarding the examples of new solutions. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Therefore, Baker fails to teach or suggest “searching either one of a meta database or a case database in accordance with the information, the meta database storing information on common rules to resolve each of the plurality of problems, the common rules being extracted from the plurality of problems and being classified according to characteristics of each of the plurality of problems, the meta database

being provided within a second apparatus including a content offer server in advance, the case database storing information on a plurality of problems which have occurred in the past, and the case database being provided within a server accordance with the information” as recited in claim 1 and as similarly recited in claims 8, 11, 12, and 34.

Furthermore, Baker fails to teach or suggest “searching said meta database, if it is determined that the meta database is to be searched, or searching said case database, if it determined that the meta database is not to be searched, for a rule for solving the problem in response to the instruction received, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions for any of the plurality of problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the problems, each example including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions” as recited in claim 1 and as similarly recited in claims 8, 11, 12, and 34.

B. Claims 30 and 39

The present invention, as recited in claim 30, includes provides a method for generating information on solutions for solving problems, the generated information being output to a display at a site server. The method includes determining whether

or not a meta database is to be searched in accordance with information on a database to be searched. The method also includes searching either a meta database or a case database for a rule for solving a problem, in response to an instruction including the information on the database to be searched. If it is determined that the meta database is to be searched, then the meta database is searched. If it is determined that the meta database is not to be searched, then case database is searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to generate a relationship between each solution and each problem to be solved. The instruction is related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. The method also includes displaying data on the display at the site server regarding examples of new solutions to solve the problems input by the user along with a corresponding instrument, based on a search result and with corresponding rules in the plurality of rules in the

meta database, history of input instructions, and a plurality of instruments in the solutions with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. The prior art does not disclose all these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

As previously discussed, Syeda-Mahmood teaches a system for selecting multimedia databases over networks. However, there is no teaching or suggestion in Syeda-Mahmood of the method for generating information, as recited in claim 30 of the present invention.

One feature of the present invention, as recited in claim 30, includes searching either a meta database or a case database for a rule for solving a problem, in response to an instruction including the information on the database to be searched. If it is determined that the meta database is to be searched, then the meta database is searched. If it is determined that the meta database is not to be searched, then case database is searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to generate a relationship between each solution and each

problem to be solved. The instruction is related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Syeda-Mahmood does not disclose this feature.

For example, Syeda-Mahmood does not teach or suggest where the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. This feature of the present invention is shown, for example, on Fig. 3 and is described in the accompanying text. To support the assertion that Syeda-Mahmood teaches this feature, the Examiner cites column 1, line 65 to column 2, line 16. However, neither the cited text nor any other portion of Syeda-Mahmood discloses the claimed feature. The cited text provides background information regarding the invention, including problems sought to be overcome by the Syeda-Mahmood system. For instance, the text describes where if a query is posed to several databases, the answers may need consolidation and summarization before they can be presented to a user. This has no relationship whatsoever to where the meta database of the present invention includes a plurality

of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter, as claimed.

By way of further example, Syeda-Mahmood does not teach or suggest a meta database or a case database, as claimed. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. To support the assertion that Syeda-Mahmood discloses a meta database and a case database, the Examiner cites column 5, line 39 to column 6, line 22. However, as previously discussed, neither the cited text nor any other portions of Syeda-Mahmood teach or suggest the claimed features. For example, as described in the cited text, Syeda-Mahmood describes a meta-database 4, as shown in Fig. 2. The meta-database is further divided into a first level 4' and a second level 4". At the first level 4', the databases at web sites can be categorized into groups based on the type of queries they support and the types of media data they house. At the second level 4", the database sites are categorized based on the query type at the earlier level and is further grouped based on scope and relevancy data for handling image content-based content queries. These features of both the first level and the second level of the meta database 4 of Syeda-Mahmood are quite different from the meta database

and case database of the present invention. More specifically, the first level of Syeda-Mahmood is not a case database, where the case database stores information on a plurality of problems that have occurred in the past, and the second level of Syeda-Mahmood is not a meta database, where the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems, as claimed.

Therefore, Syeda-Mahmood fails to teach or suggest “searching, at the site server, in response to an instruction including the information on the database to be searched related to the problem input by a user, the meta database, if it is determined the meta database is to be searched, or searching a case database, if it is determined that the meta database is not to be searched, for a rule for solving a problem, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to generate a relationship between each solution and each problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument” and “wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to

characteristics of each of the plurality of problems” and “wherein the case database stores information on a plurality of problems which have occurred in the past” as recited in claim 30.

The above noted deficiencies of Syeda-Mahmood are not supplied by any of the other references of record, namely Baker, whether taken individually, or in combination with each other. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

As previously discussed, Baker teaches a diagnostic system using a Bayesian network model having link weights updated experimentally. However, there is no teaching or suggestion in Baker of the method for generating information on new solutions for solving problems, as recited in claim 30 of the present invention.

One feature of the present invention, as recited in claim 30, includes searching either a meta database or a case database for a rule for solving a problem, in response to an instruction including the information on the database to be searched. If it is determined that the meta database is to be searched, then the meta database is searched. If it is determined that the meta database is not to be searched, then case database is searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an

analytical instrument to generate a relationship between each solution and each problem to be solved. The instruction is related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Therefore, Baker fails to teach or suggest "searching, at the site server, in response to an instruction including the information on the database to be searched related to the problem input by a user, the meta database, if it is determined the meta database is to be searched, or searching a case database, if it is determined that the meta database is not to be searched, for a rule for solving a problem, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to generate a relationship between each solution and each problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis

condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument” and “wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems” and “wherein the case database stores information on a plurality of problems which have occurred in the past” as recited in claim 30.

C. Claims 31-33 and 40-42

The present invention, as recited in claim 31, and as similarly recited in claims 32 and 33, provides an information service providing system including means for accepting data. The data includes information regarding a database to be searched about a problem from a user who requests an information service. The system also includes means for determining whether or not a meta database is to be searched in accordance with the information on the database to be searched. Also included in the system is a means for searching for a rule for solving the problem in response to an instruction input by the user and in accordance with the information on the database to be searched. The meta database is searched, if it is determined that the meta database is to be searched, and a case database is searched, if it is determined that the meta database is not to be searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. Each of the rules is a physical or chemical rule indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an

analytical instrument to determine information on a relationship between the new solution and the problem to be solved. The instruction is related to a combination of state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. The system further includes a means for displaying the new solutions to solve the problem, along with corresponding instruments based on a search result and the corresponding rules in the plurality of rules in the meta database, history of input instructions, and a plurality of instruments in the solutions with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when morphological observation is selected as the analysis selection. The prior art does not disclose all these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

As previously discussed, Syeda-Mahmood teaches a system for selecting multimedia databases over networks. However, there is no teaching or suggestion in Syeda-Mahmood of the information service providing system or the recording

medium having instructions for providing a solution to a problem, as recited in claim 31, and as similarly recited in claims 32 and 33 of the present invention.

One feature of the present invention, as recited in claim 31, and as similarly recited in claims 32 and 33, includes means for searching for a rule for solving the problem in response to an instruction input by the user and in accordance with the information on the database to be searched. The meta database is searched, if it is determined that the meta database is to be searched, and a case database is searched, if it is determined that the meta database is not to be searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. Each of the rules is a physical or chemical rule indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to determine information on a relationship between the new solution and the problem to be solved. The instruction is related to a combination of state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Syeda-Mahmood does not disclose this feature.

For example, Syeda-Mahmood does not teach or suggest where the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. This feature of the present invention is shown, for example, on Fig. 3 and is described in the accompanying text. To support the assertion that Syeda-Mahmood teaches this feature, the Examiner cites column 1, line 65 to column 2, line 16. However, neither the cited text nor any other portion of Syeda-Mahmood discloses the claimed feature. The cited text provides background information regarding the invention, including problems sought to be overcome by the Syeda-Mahmood system. For instance, the text describes where if a query is posed to several databases, the answers may need consolidation and summarization before they can be presented to a user. This has no relationship whatsoever to where the meta database of the present invention includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter, as claimed.

By way of further example, Syeda-Mahmood does not teach or suggest a meta database or a case database, as claimed. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to

the present invention, the case database stores information on a plurality of problems that have occurred in the past. To support the assertion that Syeda-Mahmood discloses a meta database and a case database, the Examiner cites column 5, line 39 to column 6, line 22. However, as previously discussed, neither the cited text nor any other portions of Syeda-Mahmood teach or suggest the claimed features. For example, as described in the cited text, Syeda-Mahmood describes a meta-database 4, as shown in Fig. 2. The meta-database is further divided into a first level 4' and a second level 4". At the first level 4', the databases at web sites can be categorized into groups based on the type of queries they support and the types of media data they house. At the second level 4", the database sites are categorized based on the query type at the earlier level and is further grouped based on scope and relevancy data for handling image content-based content queries. These features of both the first level and the second level of the meta database 4 of Syeda-Mahmood are quite different from the meta database and case database of the present invention. More specifically, the first level of Syeda-Mahmood is not a case database, where the case database stores information on a plurality of problems that have occurred in the past, and the second level of Syeda-Mahmood is not a meta database, where the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems, as claimed.

Therefore, Syeda-Mahmood fails to teach or suggest "means for searching the meta database, if it is determined that the meta database is to be searched, or

searching a case database, if it is determined that the meta database is not to be searched, where the meta database and the case database have been provided in a content offer server in advance, for a rule for solving the problem in response to an instruction input by the demander and in accordance with the information on the database to be searched, the meta database including a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument” and “wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems” and “wherein the case database stores information on a plurality of problems which have occurred in the past” as recited in claim 31, and as similarly recited in claims 32 and 33.

The above noted deficiencies of Syeda-Mahmood are not supplied by any of the other references of record, namely Baker, whether taken individually or in combination with each other. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner still fails to teach or

suggest the features of the present invention as now more clearly recited in the claims.

As previously discussed, Baker teaches a diagnostic system using a Bayesian network model having link weights updated experimentally. However, there is no teaching or suggestion in Baker of the information service providing system or the recording medium having instructions for providing a solution to a problem, as recited in claim 31, and as similarly recited in claims 32 and 33 of the present invention.

One feature of the present invention, as recited in claim 31, and as similarly recited in claims 32 and 33, includes means for searching for a rule for solving the problem in response to an instruction input by the user and in accordance with the information on the database to be searched. The meta database is searched, if it is determined that the meta database is to be searched, and a case database is searched, if it is determined that the meta database is not to be searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. Each of the rules is a physical or chemical rule indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to determine information on a relationship between the new solution and the problem to be solved. The instruction is related to a combination of state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the

meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Therefore, Baker fails to teach or suggest “means for searching the meta database, if it is determined that the meta database is to be searched, or searching a case database, if it is determined that the meta database is not to be searched, where the meta database and the case database have been provided in a content offer server in advance, for a rule for solving the problem in response to an instruction input by the demander and in accordance with the information on the database to be searched, the meta database including a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument” and “wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a

plurality of problems and being classified according to characteristics of each of the plurality of problems” and “wherein the case database stores information on a plurality of problems which have occurred in the past” as recited in claim 31, and as similarly recited in claims 32 and 33.

Both Syeda-Mahmood and Baker suffer from the same deficiencies, relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43 as being unpatentable over Syeda-Mahmood in view of Baker are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43.

II. Claims 6, 7, 14, 18, 22, and 26

Claims 6, 7, 14, 18, 22, and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Syeda-Mahmood in view of Baker, further in view of U.S. Patent No. 6,571,251 to Koski, et al. (“Koski”). This rejection is traversed for the following reasons. Claims 6, 7 and 14 are dependent on claim 1, claim 18 is dependent on claim 8, claim 22 is dependent on claim 11, and claim 26 is dependent on claim 12. Therefore, Applicants submit that dependent claims 6, 7, 14, 18, 22,

and 26 are allowable for at least the same reasons previously discussed regarding independent claims 1, 8, 11, and 12.

III. Claims 15, 19, 23, and 27

Claims 15, 19, 23, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Syeda-Mahmood in view of Baker, further in view of U.S. Patent No. 6,772,103 to King. This rejection is traversed for the following reasons. Claim 5 is dependent on claim 1, claim 19 is dependent on claim 8, claim 23 is dependent on claim 11, and claim 27 is dependent on claim 12. Therefore, Applicants submit that dependent claims 15, 19, 23, and 27 are allowable for at least the same reasons previously discussed regarding independent claims 1, 8, 11, and 12.

Furthermore, as discussed in the Amendment filed on May 18, 2006, King's system, which is in a field entirely different from that of the present invention, is nonanalogous art. As provided in MPEP 2141.01(a), a reference relied upon under 35 U.S.C. §103 must be analogous prior art. Specifically, "the reference must either be in the field of Applicants' endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). The U.S. Patent and Trademark Office classified King's method for selecting a parts kit detail under Data Processing: Structural Design, Modeling, Simulation, and Emulation (Class 703). This class has no relationship to the subject matter of the present invention, which has been classified under Data Processing: Database and File Management or Data Structures (Class 707). Therefore, Applicants submit that King is not in the field of Applicants' endeavor. Furthermore, King is not reasonably pertinent to the particular

problem with which the inventor was concerned. Therefore, this rejection should be withdrawn.

New claims 44-47

New claims 44-47 were added to more clearly describe features of the present invention. The subject matter of claims 44-47 is fully supported by the specification, for example, at Figs. 2 and 3 and the accompanying text. Applicants submit that the features of the present invention, as recited in claims 44-47, are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

For example, both Syeda-Mahmood and Baker fail to teach or suggest “means for searching for a rule for solving the problem in the meta database, if it is determined that the meta database is to be searched, or searching a case database, if it is determined that the meta database is not to be searched, wherein the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter” as recited in claim 44 and as similarly recited in claim 46.


By way of further example, both Syeda-Mahmood and Baker fail to teach or suggest "wherein the case database includes a second plurality of entries, including a field of the problem, a desired-to-improve parameter, a deteriorated parameter, a solution rule number, a problem name, and a solution to the problem" as recited in claim 45, and as similarly recited in claim 47.

In view of the foregoing amendments and remarks, Applicants submit that claims 1-47 are in condition for allowance. Accordingly, early allowance of claims 1-47 is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.40449X00).

Respectfully submitted,

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